

**SIEMENS**

**FACSIMILE COVER SHEET**

RECEIVED  
CENTRAL FAX CENTER  
NOV 29 2006

In the UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Vinod Phillip

Application No. 10/733,740

Atty. Docket No: 2003P15291US

Filed: 12/11/2003

Title: REPAIR OF ZIRCONIA-BASED THERMAL BARRIER COATINGS

Examiner: Katherine A. Bareford

Art Unit: 1762

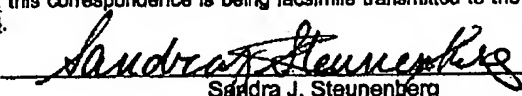
➡ **FACSIMILE ATTN TO: Katherine A. Bareford FAX NO.: 571-273-8300**

**APPELLANTS REPLY BRIEF**

Commissioner for Patents  
Alexandria, VA 22313

**Certificate of Transmission under 37 CFR 1.8**

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office on  
November 29, 2006.

  
Sandra J. Staunenberg  
Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of transmission, or this certificate must identify each submitted paper.

This facsimile cover sheet which includes a Certificate of Transmission under 37 CFR 1.8 (1 pg)  
PTO/SB/21 Transmittal (1 pg)  
Appellants Reply Brief (4 pgs)

**Number of pages being transmitted (including this cover sheet): 6 pgs**

The information contained in this facsimile message may contain attorney privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone, and return the original message to us. Thank you.

**Siemens Corporation**

Legal and Intellectual Property  
Department

4400 Alafaya Trail  
Orlando Florida 32826

Tel: 407-736-2472  
FAX: 407-736-6440

NOV. 29. 2006 3:02PM

407-736-6440

NO. 5175 3/21 (P. 2)


Approved for use through 07/31/2008. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

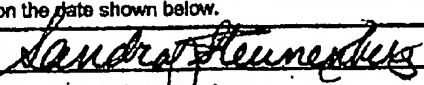
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/733,740	
	Filing Date	12/11/2003	
	First Named Inventor	Vinod Philip	
	Art Unit	1762	
	Examiner Name	Katherine A. Bareford	
Total Number of Pages In This Submission	6	Attorney Docket Number	2003P15291US

RECEIVED  
CENTRAL FAX CENTER

NOV 29 2006

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Facsimile Cover Sheet including a certificate of transmission under 37 CFR 1.8
<b>Remarks</b> APPELLANT'S REPLY BRIEF IS BEING FILED HEREWITH		
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm	SIEMENS	
Signature		
Printed Name	John P. Musone	
Date	November 29, 2006	Reg. No. 44,961

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Signature			
Typed or printed name	Sandra J. Steunenberg	Date	November 29, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

RECEIVED  
CENTRAL FAX CENTER  
NOV 29 2006

**SIEMENS**

PATENT  
Attorney Docket No. 2003P15291US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Inventor:	V. Philip et al.	)	
		)	Group Art Unit: 1762
Serial No.:	10/733,740	)	
		)	Examiner: K. Bareford
Filed:	December 11, 2003	)	

Title: REPAIR OF ZIRCONIA-BASED THERMAL BARRIER COATINGS

Commissioner For Patents  
PO BOX 1450  
Alexandria, VA. 222313-1450

Sir:

**APPELLANTS' REPLY BRIEF**

Pursuant to 37 C.F.R. § 1.193(b), this Reply Brief is responsive to the Examiner's Answer mailed October 31, 2006. Appellants reply as follows:

**Ground 1 – Section 112 Rejection of Claims 1-4, 6-12, 22, 23, 25 AND 26**

The Examiner's Answer maintains that claims 1-4, 6-12, 22, 23, 25 and 26 are unpatentable under 35 U.S.C. § 112, para. 1, as failing to comply with the written description requirement for containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed term "unbound" to modify the phrase "homogenous mixture" at the time the application was filed. (Answer p. 16).

The Examiner has a very difficult burden when making and maintaining a 35 U.S.C. § 112, para. 1 rejection. MPEP 2163 provides that "there is a strong presumption that an adequate written description of the claimed invention is present in the specification as

Serial No. 10/733,740  
Atty. Doc. No. 2003P15291US

filed," citing Wertheim, 541 F.2d at 262, 191 USPQ at 96. MPEP 2161.01(III) further provides the Examiner "must. establish on the record a reasonable basis for questioning the adequacy of the disclosure to enable a person of ordinary skill in the art to make and use the claimed invention without resorting to *undue experimentation*," citing in re Brown, 477 F.2d 946, 177 USPQ 691 (CCPA 1973); In re Ghiron, 442 F.2d 985, 169 USPQ 723 (CCPA 1971).

Because the Examiner has failed to comply with the requirements of MPEP 2163.04 when making and maintaining the 35 USC 112, para.1 rejection, the rejection must be reversed. MPEP 2163.04 requires that:

In rejecting a claim, the examiner must set forth express findings of fact which support the lack of written description conclusion (see MPEP § 2163 for examination guidelines pertaining to the written description requirement). These findings should:

(A) Identify the claim limitation at issue; and

(B) Establish a *prima facie* case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed.... When appropriate, suggest amendments to the claims which can be supported by the application's written description, being mindful of the prohibition against the addition of new matter in the claims or description.

Upon reply by applicant, before repeating any rejection under 35 USC 112, para. 1 for lack of written description, review the basis for the rejection in view of the record as a whole, including amendments, arguments, and any evidence submitted by applicant. If the whole record now demonstrates that the written description requirement is satisfied, do not repeat the rejection in the next Office action. If the record still does not demonstrate that the written description is adequate to support the claim(s), repeat the rejection under 35 USC 112, para. 1, fully respond to applicant's rebuttal arguments, and properly treat any further showings submitted by applicant in the reply.

The Examiner has not met at least two of the requirements of MPEP 2163.04.

First, the Examiner has failed to establish a *prima facie* case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the

**Serial No. 10/733,740**  
**Atty. Doc. No. 2003P15291US**

application as filed. Instead, the Examiner only argues that col. 4 lines 7-9 of the original disclosure and original claim 1 explicitly state: providing a 'composite powder' that is mixed together to form a homogeneous mixture 'prior to spraying' and then spraying the 'composite powder', and therefore the application: (a) requires that the constituents must be 'held' or 'maintained' in a physical mixture prior to flame spraying using low velocity oxygen fuel gun, and (b) cannot otherwise indicate that the constituents are not 'held' or 'maintained' in the physical mixture. As explained in MPEP 2163(II)(2)&(3), the Examiner must review the entire application to understand how applicant provides support for the various features of the claimed invention and then determine whether there is sufficient written description to inform a skilled artisan that applicant was in possession of the claimed invention as a whole at the time the application was filed. It is improper for the Examiner to merely recite one selected portion of the disclosure without consideration of the entire disclosure. Since the Examiner has completely failed to provide reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the term "unbound" to modify the phrase "homogenous mixture" and also has not shown why such skilled artisan would need to resort to undue experimentation to make and use the claimed thermal barrier coating repair, the Examiner has failed to meet the requirements of MPEP 2163.04.

Second, the Examiner has failed respond to Applicants' rebuttal arguments that the disclosure suitably conveys that the inventors had possession of the modifying term 'unbound' because page 4, lines 7-9 of the specification in fact explains: "The two constituents are mixed together to form a homogenous mixture prior to spraying, such as by ball mixing or by wet chemical mixing." Those skilled in the art would readily understand that the inventors had possession of the knowledge that the powder constituents can be unbound since ball mixing and wet chemical mixing produces a powder whose constituents are unbound. Moreover, the specification discloses that, after mixing, when the composite powder is sprayed, the lower melting temperature constituent 16 is at least partially melted by the spray process and resolidifies to form splats 26 that surround and encase the particles of the high melting temperature material 14. Page 5 lines 9-17. Thus, Applicants unquestionably appreciated that the LVOF process binds the mixed powder into positively linked constituents. The deliberate and intelligent choice to bind the constituents by the LVOF process, in of itself, evidences that

Serial No. 10/733,740  
Atty. Doc. No. 2003P15291US

Applicants appreciated that the constituents are unbound prior to the LVOF process. Instead of responding to Applicants' detailed and well reasoned rebuttal arguments as to how and why the disclosure itself evidences that a person skilled in the art at the time the application was filed would have recognized that the inventor was in possession of the term "unbound" to modify the phrase "homogenous mixture, the Examiner merely equates the term "maintained" with "held" and reiterates the same summary conclusion. Since the Examiner has completely failed to respond to Applicants' rebuttal arguments," the Examiner has failed to meet the requirements of MPEP 2163.04.

Grounds 2-9

Applicants disagree with the Examiner's grounds of rejections 2-9, as provided in Applicants previously filed Office Actions and expanded upon in Applicants Appeal Brief.

Conclusion

For the reasons provided in Applicants previously filed Office Actions, expanded upon in Applicants Appeal Brief, and highlighted in this Reply Brief, Applicants respectfully submit that the rejections set forth in the final Office Action are inapplicable to the pending claims. The honorable Board is therefore respectfully requested to reverse the final rejection of the Examiner and to remand the application to the Examiner with instructions to allow the pending claims. Please grant any extensions of time required to enter this paper. Please charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Acct. No. 19-2179.

Respectfully submitted,

Dated: 11/29/06

By: 

John P. Musone  
Registration No. 44,961  
(407) 736-6449

Siemens Corporation  
Intellectual Property Department  
170 Wood Avenue South  
Iselin, New Jersey 08830